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APR 1 8 2002

OIPE

TECH CENTER 1600/2900

```
RAW SEQUENCE LISTING                    DATE: 04/08/2002
PATENT APPLICATION:  US/10/021,577A    TIME: 10:45:48

Input Set : A:\00-87 SEQ.txt
Output Set: N:\CRF3\04082002\J021577A.raw
```

ENTERED

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    4 <110> APPLICANT: Sheppard, Paul O.
    5         Bishop, Paul D.
    7 <120> TITLE OF INVENTION: Seleno-cysteine Containing Protein
    8         Zsnk13
   10 <130> FILE REFERENCE: 00-87
C--> 12 <140> CURRENT APPLICATION NUMBER: US/10/021,577A
C--> 12 <141> CURRENT FILING DATE: 2002-03-25
   12 <150> PRIOR APPLICATION NUMBER: 60/256,676
   13 <151> PRIOR FILING DATE: 2000-12-18
   15 <160> NUMBER OF SEQ ID NOS: 6
   17 <170> SOFTWARE: FastSEQ for Windows Version 4.0
   19 <210> SEQ ID NO: 1
   20 <211> LENGTH: 1355
   21 <212> TYPE: DNA
   22 <213> ORGANISM: Agkistrodon piscivorus piscivorus
   24 <400> SEQUENCE: 1
   25 ggatccaggc tgaattcggc acgaggctgg atggagacgc cgctgctttg gctgccgctg 60
   26 ctgctgctgg ggctgctctc ggccttggcg ccgctgcgcg ccgtgcagct cgaccggagc 120
   27 cgcctgcagt ggctggcccg cgggaaggtg gagagctgtg gaggatgacg cttgaaccgc 180
   28 ctgccagagg taaaggcctt tctcaacgaa gacctgcctt tgtaccacaa catggactgt 240
   29 aagtacctgg ctggagcgga ccctgagctc atcctgctca acattcaatt tgaagaactt 300
   30 cagagaatcc cattgagtga catgagccgg gaagagataa accagctgat gcaagaattg 360
   31 ggattctacc ggaaagacac gccggactcc cctgttcccg atgcttttca aatggcgcct 420
   32 gctaattcac tgccatcaga tgtggaagca atgaagaaca gacgtgcgaa agagaaaaag 480
   33 ggggcggggg gtccagacct atagaattca acgtgctctg cttgtgaagg gtgcctgtta 540
   34 gaaagaatgg gaagtctcag ggcattggca atatctaaat aatctgcaac catatagata 600
   35 agatctcctg tggttcacac acggctgaat tgtgctgccg gagaaattaa catttagaga 660
   36 agattcaaag gctgcaaact tttgcttaag gagaagaact tgttcgcctc agaagcaaaa 720
   37 tgtgcaaaac aaagacagcc acatatatgc aacccggcgc cagttacaga cagcccttga 780
   38 cttacgacta caatcgagac tggaaaaaac gttgttaagc atgtgcagtt gtcaagcaag 840
   39 acacccacat ggctgtgatt gtgacttttcc ccgcctgctt cgccacttgc tttgtgcttg 900
   40 tcggaagccg gttgggaaag gttgcaaatg gcgactgtgt gacttgcaga acaccgactg 960
   41 tggtgaaggg caagccaaca accaacaatc acaacagccc ttgtcaaatg gtcgtaagtg 1020
   42 aaaggcctgcc tgtaactcgg acgaaattga ctggaagaag cctcaaggga ttccgccctt 1080
   43 catcccaaga ccggatcctt gcacaaggca ccacacggg gtccactccc gtgaccagca 1140
   44 cttttccctcc aagtgtgcct cacctgtgca ggacaggatg aagcctctg cagaaagctt 1200
   45 ttgctgctga gggtggatag acacgtcctc tcgggctggg agcgcagcct gctggggagc 1260
   46 aggtcgccaa accccaactg gtttaggata gtaacaataa agttgccttc gtcaaccacc 1320
   47 aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaa              1355
   49 <210> SEQ ID NO: 2
   50 <211> LENGTH: 110
   51 <212> TYPE: PRT
   52 <213> ORGANISM: Agkistrodon piscivorus piscivorus
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  54 <220> FEATURE:
  55 <221> NAME/KEY: VARIANT
  56 <222> LOCATION: (46)...(46)
  57 <223> OTHER INFORMATION: Xaa is selenocysteine.
  59 <400> SEQUENCE: 2
  60 Met Glu Thr Pro Leu Leu Trp Leu Pro Leu Leu Leu Leu Gly Leu Leu
  61  1               5                  10                  15
  62 Ser Ala Leu Ala Pro Leu Arg Ala Val Gln Leu Asp Arg Ser Arg Leu
  63             20                  25                  30
  64 Gln Trp Leu Ala Arg Gly Lys Val Glu Ser Cys Gly Gly Xaa Arg Leu
  65         35                  40                  45
  66 Asn Arg Leu Pro Glu Val Lys Ala Phe Leu Asn Glu Asp Leu Pro Leu
  67     50                  55                  60
  68 Tyr His Asn Met Asp Leu Lys Tyr Leu Ala Gly Ala Asp Pro Glu Leu
  69 65                  70                  75                  80
  70 Ile Leu Leu Asn Ile Gln Phe Glu Glu Glu Gln Arg Ile Pro Leu Ser
  71                 85                  90                  95
  72 Asp Met Ser Arg Glu Glu Ile Asn Gln Leu Met Gln Glu Leu
  73                 100                 105                 110
  76 <210> SEQ ID NO: 3
  77 <211> LENGTH: 471
  78 <212> TYPE: DNA
  79 <213> ORGANISM: Artificial Sequence
  81 <220> FEATURE:
  82 <223> OTHER INFORMATION: This degenerate nucleotide sequence encodes the
  83       amino acid sequence of SEQ ID NO:2.
  85 <221> NAME/KEY: variation
  86 <222> LOCATION: (1)...(471)
  87 <223> OTHER INFORMATION: N is A, G, C, or T.
  89 <400> SEQUENCE: 3
  90 atggaracnc cnytnytntg gytnccnytn ytnytnytng gnytnytnws ngcnytngcn 60
  91 ccnytnnmgng cngtncaryt ngaymgnwsn mgnytncart ggytngcnmg nggnaargtn 120
  92 garwsntgyg gnggnnnnmg nytnaaymgn ytnccngarg tnaargcntt yytnaaygar 180
  93 gayytnccny tntaycayaa yatggayytn aartayytng cnggngcnga yccngarytn 240
  94 athytnytna ayathcartt ygargarytn carmgnathc cnytnwsnga yatgwsnmgn 300
  95 gargaratha aycarytnat gcargarytn ggnttytaym gnaargayac nccngaywsn 360
  96 ccngtnccng aygcnttyca ratggcnccn gcnaaywsny tnccnwsnga ygtngargcn 420
  97 atgaaraaym gnmgngcnaa rgaraaraar gggngcnggng gnccngayyt n         471
  99 <210> SEQ ID NO: 4
 100 <211> LENGTH: 48
 101 <212> TYPE: DNA
 102 <213> ORGANISM: Artificial Sequence
 104 <220> FEATURE:
 105 <223> OTHER INFORMATION: Selenocysteine insertion motif.
 107 <221> NAME/KEY: variation
 108 <222> LOCATION: (5)...(14)
 109 <223> OTHER INFORMATION: N is A, T, G, or C.
 111 <221> NAME/KEY: variation
 112 <222> LOCATION: (15)...(16)
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                    Input Set : A:\00-87 SEQ.txt
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113 <223> OTHER INFORMATION: N is A, T, G, C, or absent.
115 <221> NAME/KEY: variation
116 <222> LOCATION: (19)...(34)
117 <223> OTHER INFORMATION: N is A, T, G, or C.
119 <221> NAME/KEY: variation
120 <222> LOCATION: (35)...(44)
121 <223> OTHER INFORMATION: N is A, T, G, C, or absent.
123 <221> NAME/KEY: variation
124 <222> LOCATION: (45)...(45)
125 <223> OTHER INFORMATION: N is A, T, G, or C.
127 <221> NAME/KEY: variation
128 <222> LOCATION: (48)...(48)
129 <223> OTHER INFORMATION: N is A, T, G, or C.
131 <400> SEQUENCE: 4
132 augannnnnn nnnnnnaann nnnnnnnnnn nnnnnnnnnn nnnnngan             48
134 <210> SEQ ID NO: 5
135 <211> LENGTH: 40
136 <212> TYPE: DNA
137 <213> ORGANISM: Artificial Sequence
139 <220> FEATURE:
140 <223> OTHER INFORMATION: Selenocysteine insertion element.
142 <400> SEQUENCE: 5
143 atgaagccct ctgcagaaag cttttgctgc tgagggtgga                     40
145 <210> SEQ ID NO: 6
146 <211> LENGTH: 44
147 <212> TYPE: DNA
148 <213> ORGANISM: Artificial Sequence
150 <220> FEATURE:
151 <223> OTHER INFORMATION: Selenocysteine insertion element.
153 <400> SEQUENCE: 6
154 atgaagccct ctgcagaaag cttttgctgc tgagggtgga taga               44
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            VERIFICATION SUMMARY              DATE: 04/08/2002
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            Input Set : A:\00-87 SEQ.txt
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L:12 M:270 C: Current Application Number differs, Replaced Current Application No
L:12 M:271 C: Current Filing Date differs, Replaced Current Filing Date
L:64 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:2
L:90 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:3
L:91 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:3
L:92 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:3
L:93 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:3
L:94 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:3
L:95 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:3
L:96 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:3
L:97 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:3
L:132 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:4
```